United States
Department of
Agriculture

**Natural
Resources
Conservation
Service**

Idaho
Basin Outlook Report
February 1, 1995

Basin Outlook Reports
and
Federal - State - Private
Cooperative Snow Surveys

For more water supply and resource management information, contact:

Your local Natural Resources Conservation Service Office
or
Natural Resources Conservation Service
Snow Surveys
3244 Elder Street, Room 124
Boise, ID 83705-4711
(208) 334-1614

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

IDAHO WATER SUPPLY OUTLOOK REPORT

FEBRUARY 1, 1995

SUMMARY

Southern Idaho snowpacks benefitted from the Pacific moisture that caused devastating flooding in California in early January. With snowpacks near or above average across most of the state, streamflow projections look promising for 1995. That's good news, because a good runoff season is critical due to the lack of reservoir storage across the state. Heavy rains and warm temperatures in late January and early February caused streams to rise significantly, improving reservoir storage across the state. Two more months of normal precipitation will help ensure adequate water supplies next summer.

SNOWPACK

The same storm systems that caused widespread flooding in California were beneficial to southern Idaho snowpacks. Snowfall was above average in southern and central Idaho during January, and most basins are now reporting above average snowpacks for February 1. Snowpacks in northern Idaho are near average, having lost a few percentage points over the month. Heavy rains and record warm temperatures in late January and early February melted much of the low elevation snowpack, decreasing the chance of later spring flooding while improving reservoir storage in many areas. High elevation snowpacks benefitted from the precipitation, with little melt taking place.

PRECIPITATION

Idaho's central and southern mountains received abundant Pacific moisture during January. SNOTEL sites in the Wood and Lost River basin reported 150% of normal precipitation for the month. The tropical flow did not extend into northern Idaho, however, where precipitation was only 75 to 80% of average. Precipitation in eastern Idaho was near average. Warm temperatures in late January brought the freezing level up to 8000 feet, and accompanying heavy rains melted most of the low elevation snowpack in the state. Temperatures were above normal for the month of January, as warm, moist tropical air streamed into Idaho from the Pacific.

RESERVOIRS

Reservoir storage remains below average throughout most of Idaho. Sixteen major reservoirs in the state are currently reporting a combined storage of 43% of average. With plenty of storage space available, the possibility of spring flooding is low in spite of the healthy snowpacks throughout the state. Current indications call for most major reservoir systems to fill with the possible exception of Anderson Ranch Reservoir on the Boise. The Boise system reports less than half of normal storage; last year there was more than twice as much carryover in the system. A full irrigation supply is expected in the Boise basin, however. The lowest storage is reported in the Wood River basin, where Magic Reservoir is only 7% full. Storage in the upper Snake basin is less than half of normal for this time of year, or 27% of capacity. Conditions are better in the Payette basin where the system is half full.

Note: NRCS reports reservoir information in terms of usable volumes, which includes both active, inactive, and in some cases dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in the back of this report.

STREAMFLOW

Heavy rains and warm temperatures near the end of January caused streamflows to increase dramatically statewide. The rain on snow event brought the Owyhee River to over 16,000 cfs on February 2, and even the central mountain streams responded with unusually high flows. The high elevation snowpack remains intact, however, promising good runoff when the spring snowmelt season begins. Currently, forecasts call for 90 to 130% of average runoff statewide, with the lower volumes expected in northern Idaho, the lower Snake mainstem, and the Bear River area. Above average volumes are expected in the Payette, Wood, Lost, Henrys Fork, and Teton basins.

RECREATION OUTLOOK

With snowpack conditions near or above normal in Idaho's recreational river basins, the prospects look excellent for whitewater boating this year. If the current trends continue, the possibility of high flows exists during the early part of the spring runoff, with good flows extending well into the summer. The southwestern Idaho rivers (Jarbidge, Owyhee, and Bruneau) promise one of the best seasons in the last ten years. Reservoir based recreation looks encouraging as well with most major reservoirs around the state expected to fill to capacity.

IDAHO SURFACE WATER SUPPLY INDEX

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences.

SWSI values are published January through May, and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage figures alone. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been established for most basins to indicate the potential for agricultural water shortages.

The following agencies and cooperators provide assistance in the preparation of the Surface Water Supply Index for Idaho:

US Department of Agriculture, Natural Resources Conservation Service
US Department of Interior, Bureau of Reclamation
US Department of Commerce, National Weather Service
US Army Corps of Engineers
Idaho Department of Water Resources
Idaho Water Users Association
PaciCorp

IDAHO SURFACE WATER SUPPLY INDEX (SWSI)
As of February 1, 1995

Basin or Region	SWSI	Most Recent Year With Similar SWSI Value	Agricultural Water Supply Shortages May Occur When SWSI Is Less Than:
Panhandle	-1.2	1993	NA
Clearwater	1.7	1993	NA
Salmon	0.0	1993/80	NA
Weiser	-0.9	1989/85	NA
Payette	1.7	1986/80	NA
Boise	-0.3	1993	-2.6
Big Wood	0.8	1978	-1.4
Little Wood	1.5	1993	-2.1
Big Lost	1.5	1980	-0.8
Little Lost	1.6	1986	0.0
Henrys Fork	2.6	1982	-3.3
Snake (American Falls)	1.2	1980	-2.0
Oakley	0.0	1993/82	0.0
Salmon Falls	0.9	1987	0.0
Bruneau	1.7	1993/80	NA
Owyhee	-1.2	1993	NA
Bear River	-3.8	1994	-3.8

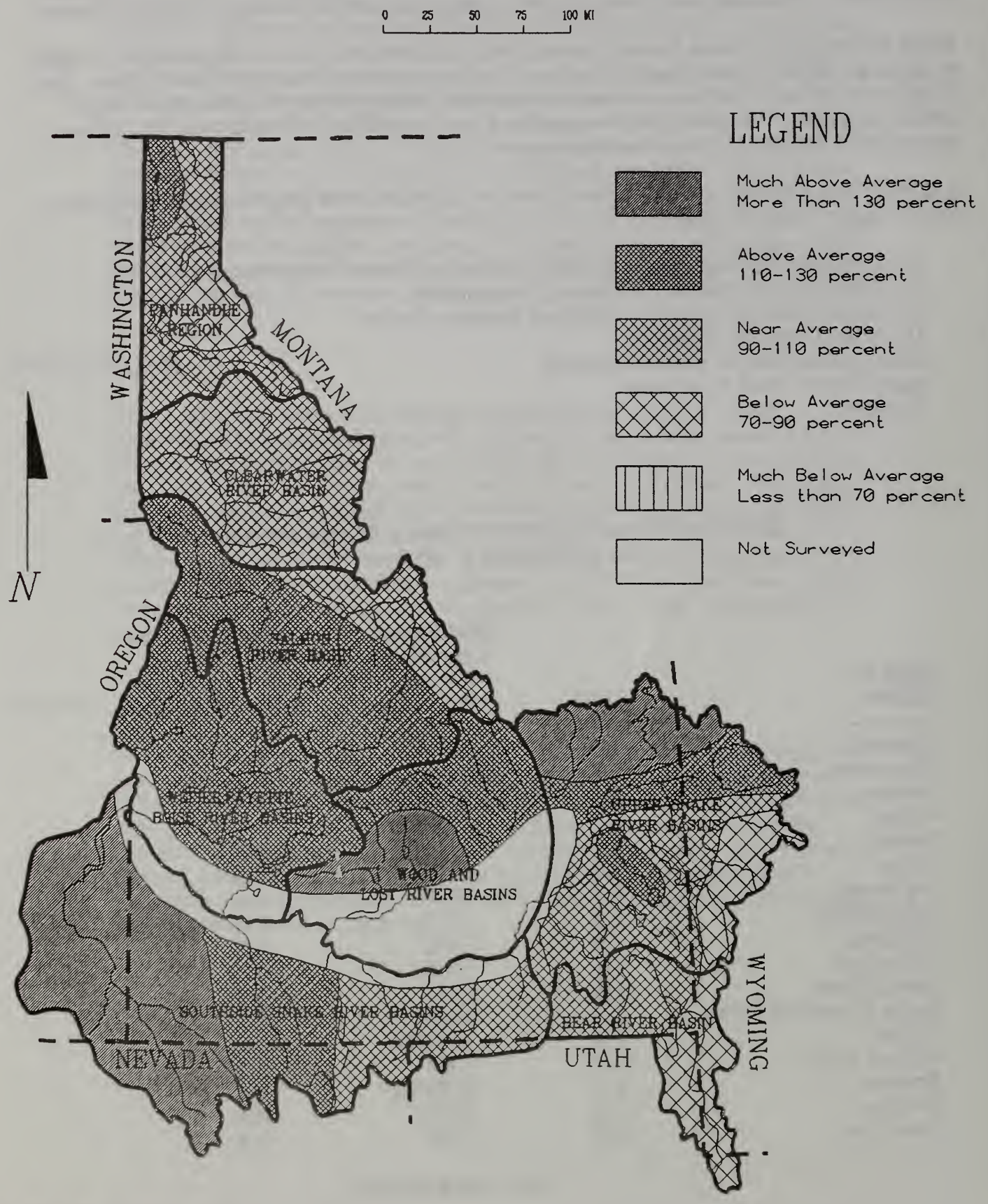
NA - Not Applicable

SWSI Scale

1.5 to 4.1	Above Normal Supply
-1.5 to 1.5	Near Normal Supply
-3.0 to -1.5	Below Normal Supply
-4.1 to -3.0	Very Short Supply

IDAHO MOUNTAIN SNOWPACK

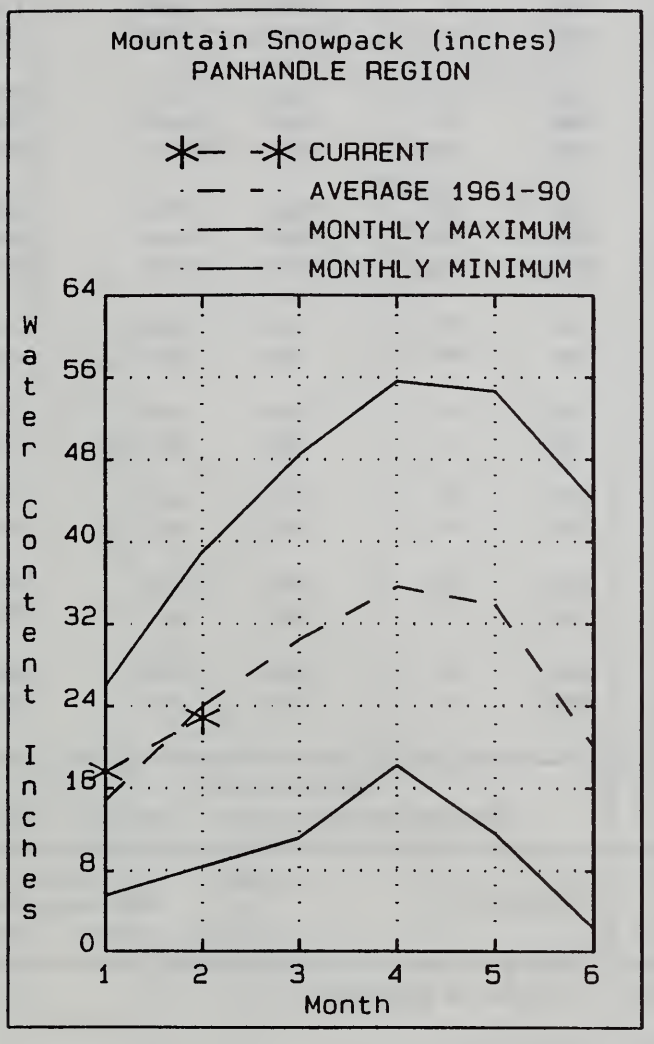
FEBRUARY 1, 1995

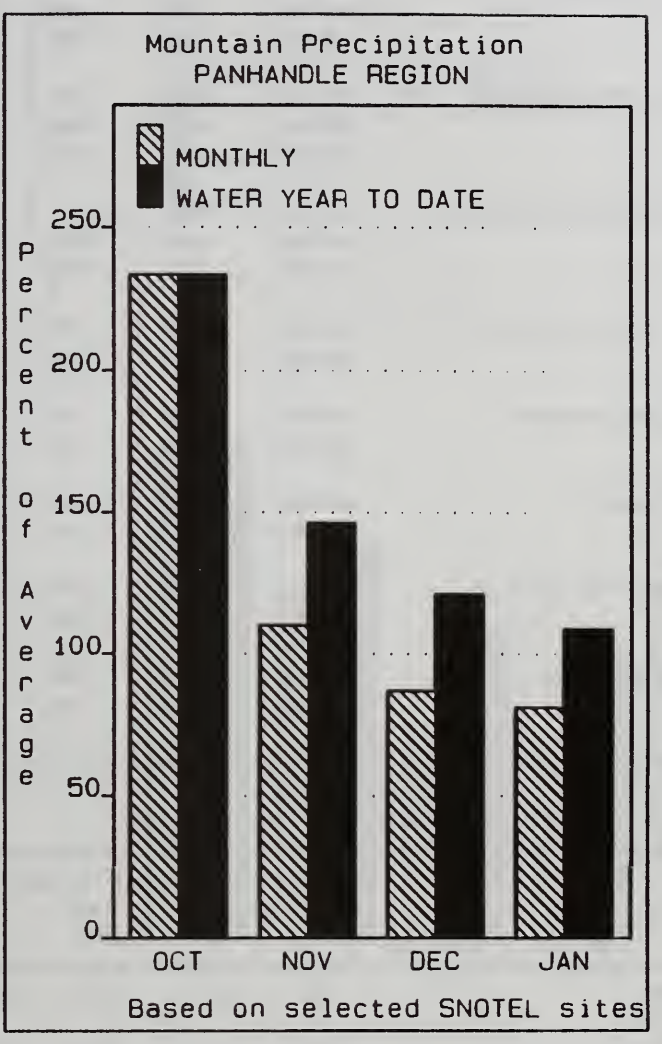


NATURAL RESOURCES CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

PANHANDLE REGION

FEBRUARY 1, 1995





WATER SUPPLY OUTLOOK

Northern Idaho did not receive the heavy inflow of warm tropical moisture that blessed southern Idaho during January. Mountain precipitation was only 81% of average for the month, bringing the water year total to 109% of average. As a result, snowpack percentages decreased considerably during January and currently range from 90 to 115% of average. Streamflow forecasts call for 94% of average flow for the Spokane River this summer. Reservoir storage is variable in the large lakes in the Idaho Panhandle, ranging from 74% of average for Lake Pend Oreille to 112% for Priest Lake. Water supplies should be adequate for most uses this year, similar to the 1993 water year.

PANHANDLE REGION
Streamflow Forecasts - February 1, 1995

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KOOTENAI at Leonia (1,2)	APR-JUN	3970	4890	5300	93	5710	6630	5701
	APR-JUL	5080	6210	6730	93	7250	8380	7199
	APR-SEP	5840	7150	7740	94	8330	9640	8275
CLARK FK at Whitehorse Rpds (1,2)	APR-JUN	5210	7220	8140	81	9060	11100	10050
	APR-JUL	6010	8380	9450	81	10500	12900	11730
	APR-SEP	6620	9220	10400	81	11600	14200	12910
PEND OREILLE Lake Inflow (1,2)	APR-JUN	5850	8330	9455	83	10600	13100	11390
	APR-JUL	6980	9610	10800	82	12000	14600	13150
	APR-SEP	7720	10600	11900	83	13200	16100	14370
PRIEST nr Priest River (1,2)	APR-JUL	530	720	805	99	890	1080	814
	APR-SEP	570	770	860	99	950	1150	868
COEUR D'ALENE at Enaville	APR-JUL	540	660	740	96	820	940	770
	APR-SEP	475	690	770	95	850	1080	809
ST.JOE at Calder	APR-JUL	880	1020	1110	95	1200	1340	1169
	APR-SEP	865	1060	1160	94	1260	1460	1237
SPOKANE near Post Falls (2)	APR-JUL	1530	2210	2470	94	2730	4130	2633
	APR-SEP	1640	2290	2560	94	2830	3470	2730
SPOKANE at Long Lake	APR-JUL	1940	2350	2632	90	2910	3330	2936
	APR-SEP	2120	2550	2842	90	3130	3560	3159

PANHANDLE REGION
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	1635.0	1136.0	2362.0
FLATHEAD LAKE	1791.0	962.9	826.9	1095.0
NOXON RAPIDS	335.0	326.5	320.6	314.2
PEND OREILLE	1561.3	605.8	553.6	823.1
COEUR D'ALENE	238.5	116.5	53.5	127.8
PRIEST LAKE	119.3	60.0	55.5	53.4

PANHANDLE REGION
Watershed Snowpack Analysis - February 1, 1995

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	24	134	100
Moyie River	2	174	84
Priest River	4	158	115
Pend Oreille River	74	136	97
Rathdrum Creek	4	169	151
Hayden Lake	0	0	0
Coeur d'Alene River	5	146	87
St. Joe River	2	171	97
Spokane River	11	160	107
Palouse River	1	167	100

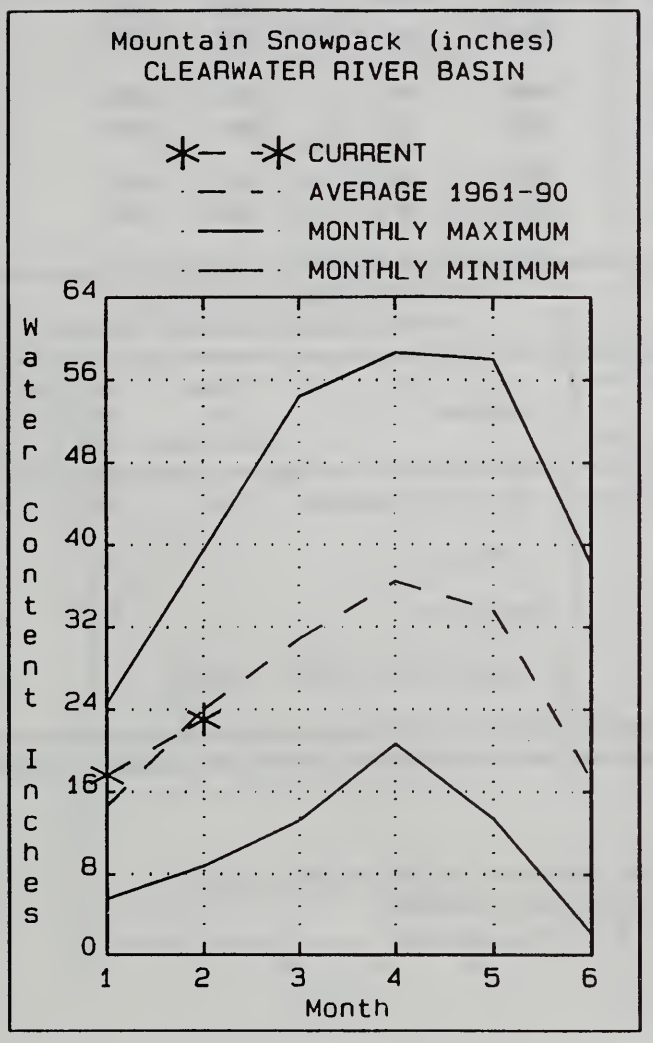
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

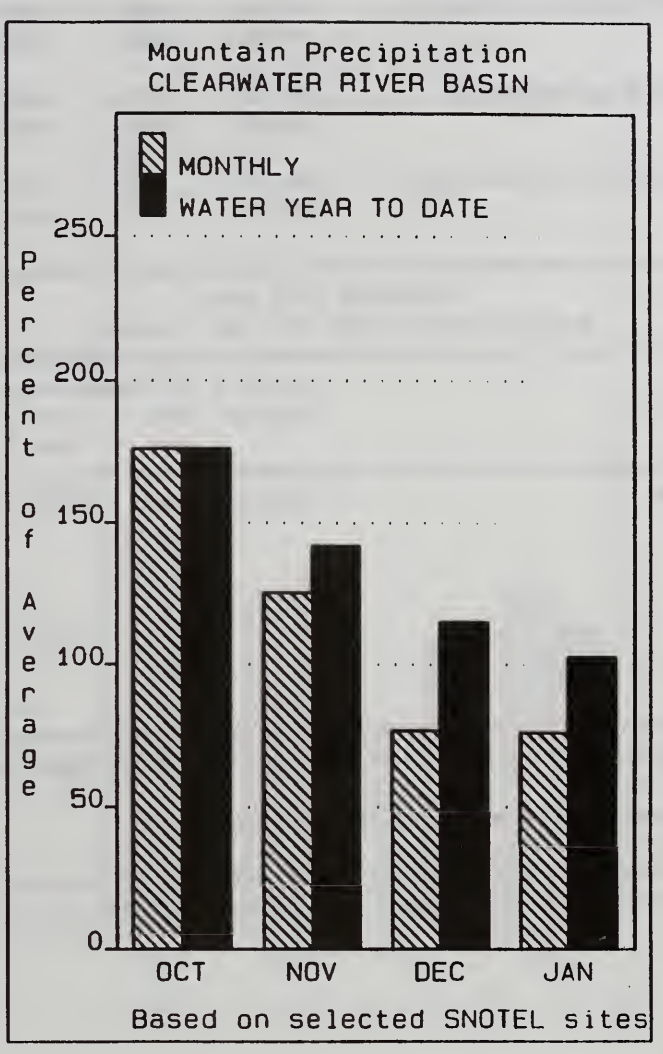
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

CLEARWATER RIVER BASIN

FEBRUARY 1, 1995





WATER SUPPLY OUTLOOK

Mountain precipitation in January was 76% of average, the lowest in the state. Precipitation for the water year remains near normal at 103% of average. Snowpack percentages decreased from last month and now range from 94% of average for the North Fork Clearwater basin to 101% for the Lochsa basin. Streamflow forecasts call for 95 to 98% of average flows for the Clearwater River basin this spring and summer. Reservoir storage in Dworshak is 59% of capacity, less than last year at this time. This year's total water supply (streamflow and reservoir storage) should be better than median and similar to the 1993 season.

CLEARWATER RIVER BASIN
Streamflow Forecasts - February 1, 1995

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
DWORSHAK Reservoir Inflow (2)	APR-JUL	1430	2330	2560	95	2790	3690	2692
	APR-SEP	2140	2480	2720	95	2960	3300	2866
CLEARWATER at Orofino (1)	APR-JUL	2870	4080	4630	98	5180	6390	4718
	APR-SEP	3020	4300	4880	98	5460	6740	4976
CLEARWATER at Spalding (1,2)	APR-JUL	4470	6520	7450	98	8380	10400	7618
	APR-SEP	4720	6890	7870	98	8850	11000	8052

CLEARWATER RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3459.0	2026.0	2544.2	2198.2

CLEARWATER RIVER BASIN
Watershed Snowpack Analysis - February 1, 1995

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
North Fork Clearwater	12	163	94
Lochsa River	4	160	101
Selway River	5	133	96
Clearwater Basin Total	20	157	95

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
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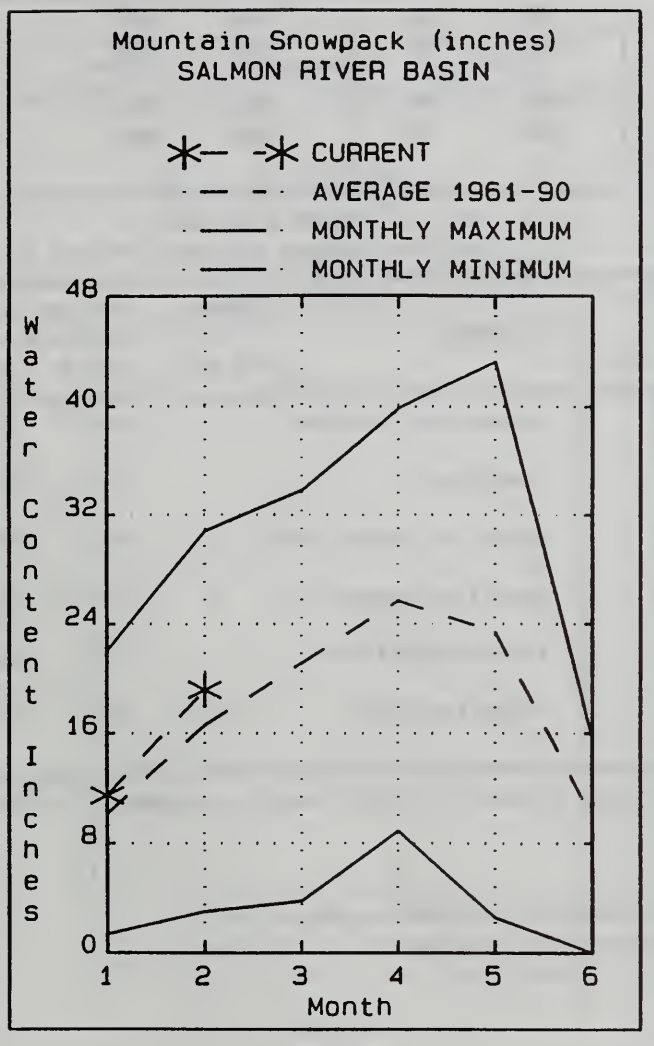
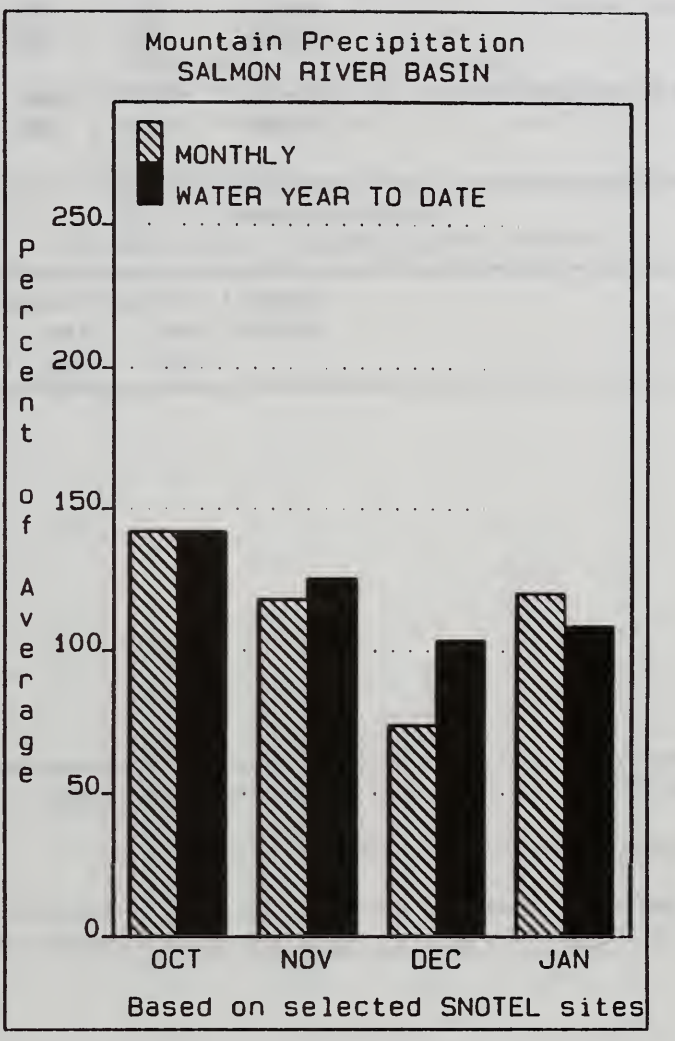
SALMON RIVER BASIN

FEBRUARY 1, 1995





WATER SUPPLY OUTLOOK

The Salmon basin was once again the dividing line for storm tracks across the state. During January, subtropical moisture brought heavy precipitation to southern Idaho, while areas north of the Salmon river received below average amounts. SNOTEL sites in the Salmon River basin reported 120% of average precipitation for the month. Snowpacks in the basin are above average, essentially the same as last month. Streamflow forecasts call for 104% of average for the Salmon River at Salmon and 97% for the Salmon River at White bird, similar to conditions in 1993. River runners and other water users can expect high flow conditions in the spring with moderate flows extending well into the summer.

SALMON RIVER BASIN
Streamflow Forecasts - February 1, 1995

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SALMON at Salmon (1)	APR-JUL	530	790	905	104	1020	1280	869
	APR-SEP	620	925	1060	104	1200	1500	1019
SALMON at White Bird (1)	APR-JUL	3720	5140	5780	97	6420	7840	5956
	APR-SEP	4130	5700	6410	97	7120	8690	6602

SALMON RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

SALMON RIVER BASIN
Watershed Snowpack Analysis - February 1, 1995

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Salmon River ab Salmon	8	240	109
Lemhi River	4	174	107
Middle Fork Salmon River	3	235	119
South Fork Salmon River	3	237	124
Little Salmon River	4	185	120
Salmon Basin Total	23	200	111

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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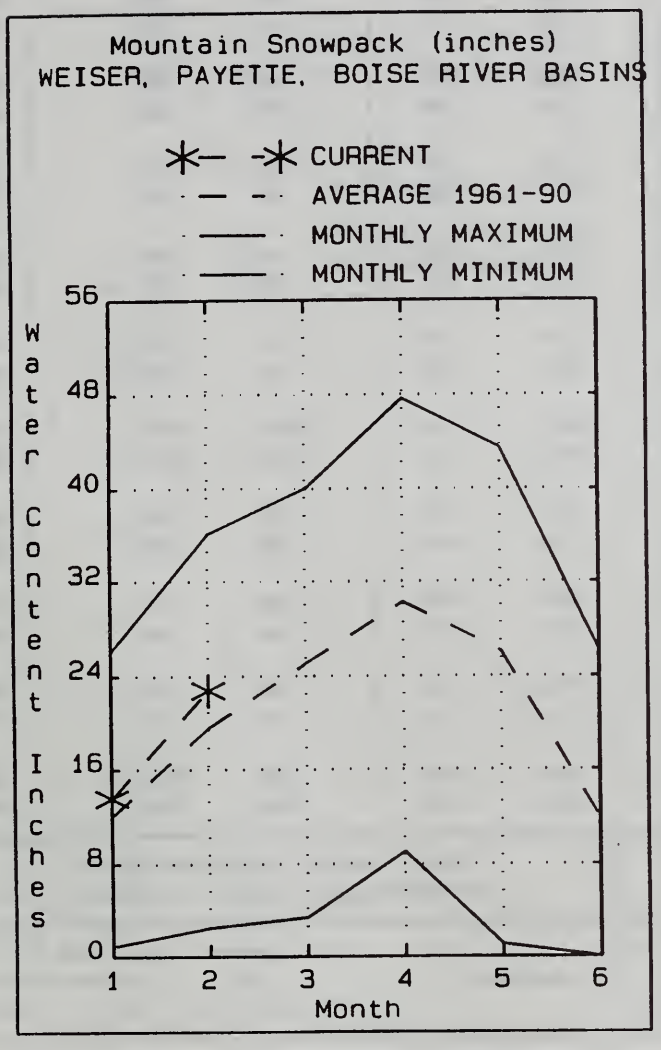
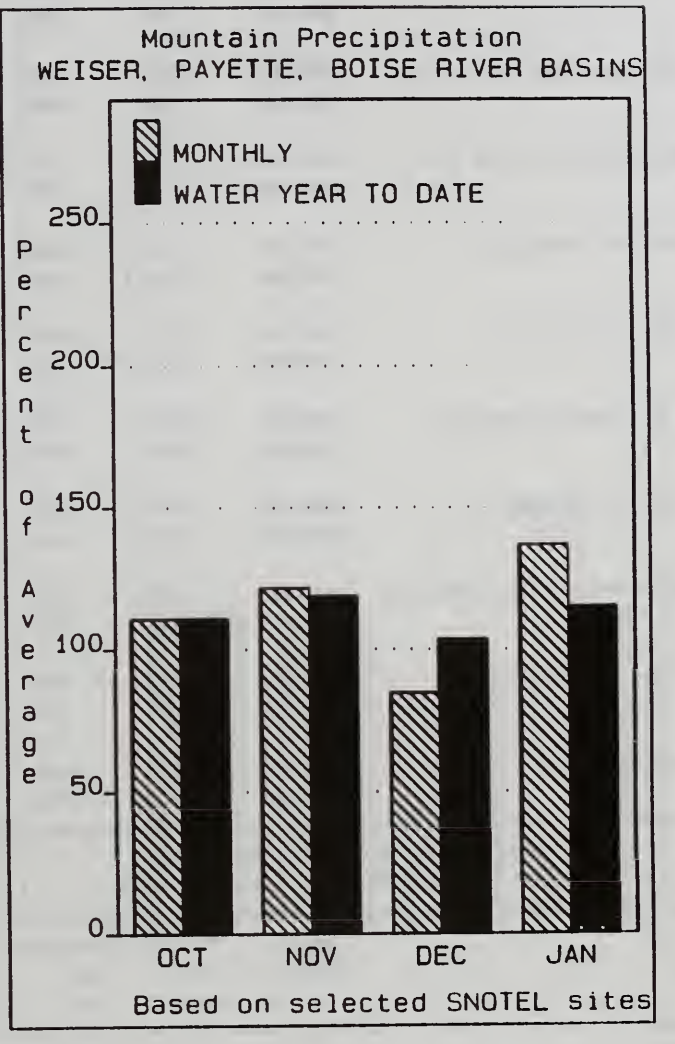
(2) - The value is natural flow - actual flow may be affected by upstream water management.

WEISER, PAYETTE, BOISE RIVER BASINS

FEBRUARY 1, 1995





WATER SUPPLY OUTLOOK

Idaho's central mountains received heavy snow and rain during January, thanks to the influx of warm, moist tropical air from the Pacific. Mountain precipitation was 137% of average -- the best month so far this water year -- bringing the water year total to 115% of average. Deadwood Summit SNOTEL site received over 16 inches of snow water in January; the normal increase is about 10 inches. Snowpacks continue to range 10 to 20% above average in these basins, increasing hopes of at least an average runoff this spring. Reservoir storage remains low after last season's demand; the Boise system is currently only one-quarter full -- less than half of normal storage for this time of year. Anderson Ranch Reservoir may not quite fill to capacity this year. Payette basin reservoirs report somewhat better storage: 50% of capacity, 88% of average. Streamflow forecasts call for 108% of average runoff for the Boise River near Boise and 116% for the Payette River, indicating an adequate water supply for both basins this year.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - February 1, 1995

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WEISER nr Weiser (1)	APR-JUL	121	280	355	92	430	590	386
	APR-SEP	131	305	382	92	460	635	415
SF PAYETTE at Lowman	APR-JUL	370	430	469	109	510	570	432
	APR-SEP	420	485	530	109	575	640	488
DEADWOOD RESERVOIR Inflow (2)	APR-JUL	108	131	142	105	153	176	135
	APR-SEP	115	133	145	102	157	175	143
NF PAYETTE nr Cascade (2)	APR-JUL	465	545	595	120	645	725	496
	APR-SEP	460	570	625	117	680	790	533
NF PAYETTE nr Banks (2)	APR-JUL	570	670	740	122	810	910	607
	APR-SEP	650	765	838	121	915	1020	690
PAYETTE nr Horseshoe Bend (2)	APR-JUL	1510	1730	1872	116	2020	2230	1618
	APR-SEP	1470	1880	2040	116	2200	2600	1755
BOISE near Twin Springs	APR-JUL	510	620	675	107	730	835	631
	APR-SEP	575	660	720	105	780	865	686
SF BOISE at Anderson Rnch Dm (1,2)	APR-JUL	425	535	588	108	640	750	544
	APR-SEP	440	555	610	105	665	780	582
MORES CK nr Arrowrock Dam	APR-JUL	83	104	118	91	132	153	129
	APR-SEP	87	108	123	92	138	159	134
BOISE nr Boise (1,2)	APR-JUL	1080	1410	1530	108	1650	1980	1421
	APR-SEP	1190	1480	1610	105	1740	2030	1535

WEISER, PAYETTE, BOISE RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	4.5	3.7	5.4
CASCADE	703.2	377.8	458.3	409.4
DEADWOOD	161.9	54.7	101.2	79.5
ANDERSON RANCH	464.2	55.0	332.1	300.6
ARROWROCK	286.6	139.3	236.5	223.9
LUCKY PEAK	293.2	65.1	89.2	117.4
LAKE LOWELL (DEER FLAT)	177.1	38.3	57.6	131.0

WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - February 1, 1995

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Mann Creek	1	199	143
Weiser River	3	190	127
North Fork Payette	8	186	115
South Fork Payette	4	227	118
Payette Basin Total	13	194	116
Middle & North Fork Boise	6	219	113
South Fork Boise River	6	238	112
Mores Creek	4	170	111
Boise Basin Total	12	206	111
Canyon Creek	0	0	0

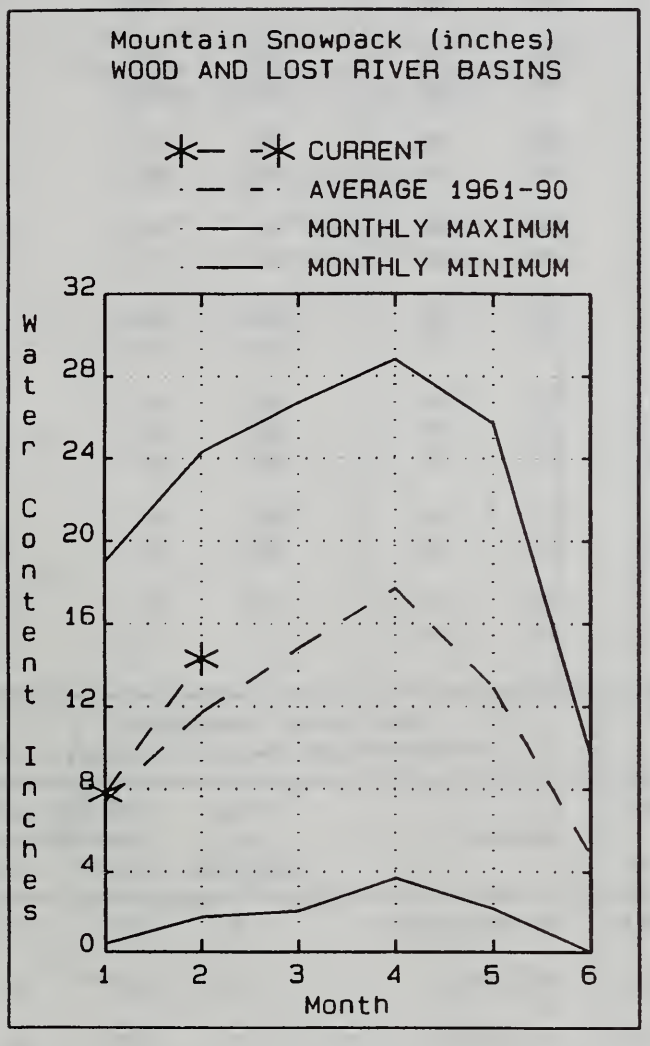
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

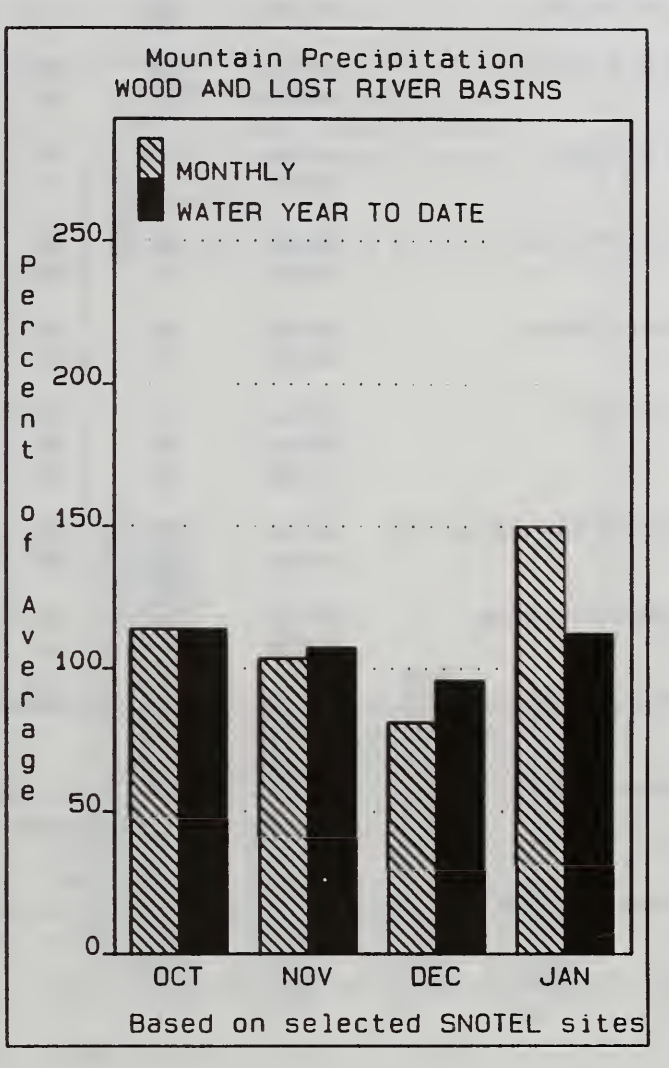
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

WOOD and LOST RIVER BASINS

FEBRUARY 1, 1995





WATER SUPPLY OUTLOOK

Heavy rain and snow in January helped improve the water supply outlook in the Wood and Lost River basins. SNOTEL sites in the area reported 150% of average precipitation during the month, bringing the water year total to 112%. Snowpack percentages also increased and now range from 115 to 135% of average -- almost three times as much snow as reported last year at this time. Reservoir storage is very low due to last year's high demands: Magic reports only 7% of capacity, Little Wood holds 35%, and Mackay is currently storing 42% of capacity. These figures represent less than one-third of the normal storage for February 1. Even so, the 1995 water supply is expected to be adequate due to the good snowpack and above average streamflow forecasts. The Surface Water Supply Index calls for near normal water supplies in the Wood and Lost River basins.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - February 1, 1995

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BIG WOOD AT HAILEY (1)	APR-SEP	230		360	126		490	286
BIG WOOD nr Bellevue	APR-JUL	163	210	240	131	270	315	183
	APR-SEP	176	225	256	130	290	335	197
CAMAS CK nr Blaine	APR-JUL	77	110	132	130	154	187	102
	APR-SEP	78	111	133	129	155	188	103
BIG WOOD blw Magic Dam (2)	APR-JUL	280	350	394	134	440	505	294
	APR-SEP	285	355	400	129	445	515	309
LITTLE WOOD nr Carey	APR-JUL	88	107	120	130	133	152	92
	APR-SEP	93	113	126	127	140	159	99
BIG LOST at Howell	APR-JUN	111	137	155	110	173	199	141
	APR-JUL	139	175	200	110	225	260	181
	APR-SEP	156	197	225	109	255	295	206
BIG LOST blw Mackay Reservoir (2)	APR-JUL	131	159	177	118	195	225	150
	APR-SEP	166	195	215	118	235	265	182
LITTLE LOST blw Wet Creek	APR-JUL	27	32	35	114	38	43	31
	APR-SEP	35	41	45	115	49	55	39

WOOD AND LOST RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	12.6	81.8	92.8
LITTLE WOOD	30.0	10.4	22.7	15.5
MACKAY	44.4	18.7	28.8	30.0

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - February 1, 1995

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Big Wood ab Magic	8	278	119
Camas Creek	2	284	134
Big Wood Basin Total	10	279	122
Little Wood River	3	298	133
Fish Creek	0	0	0
Big Lost River	5	298	124
Little Lost River	3	259	115

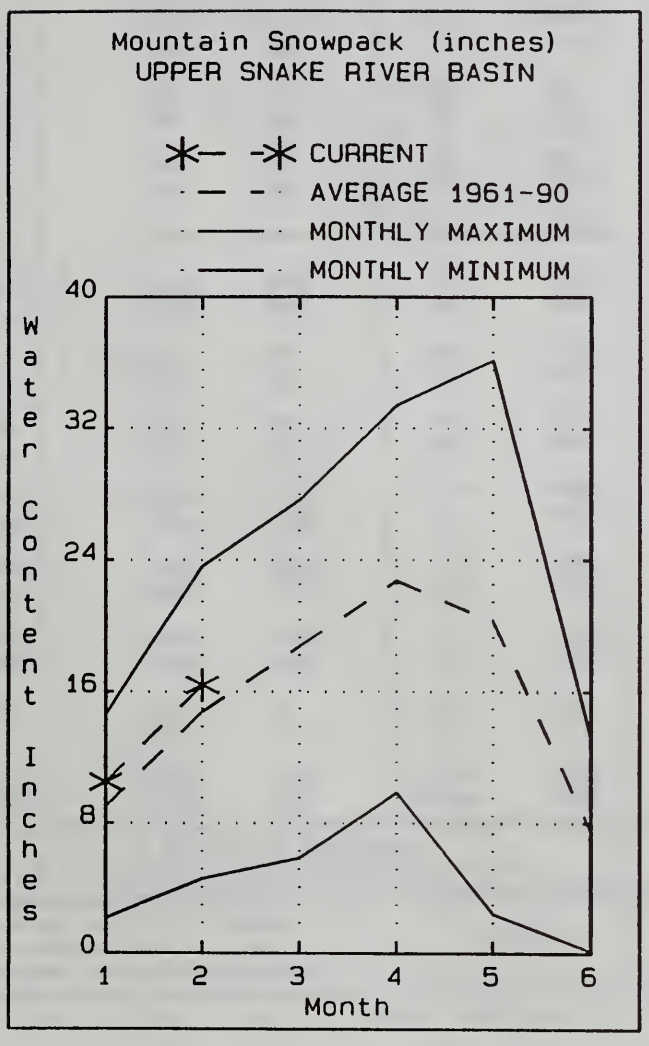
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

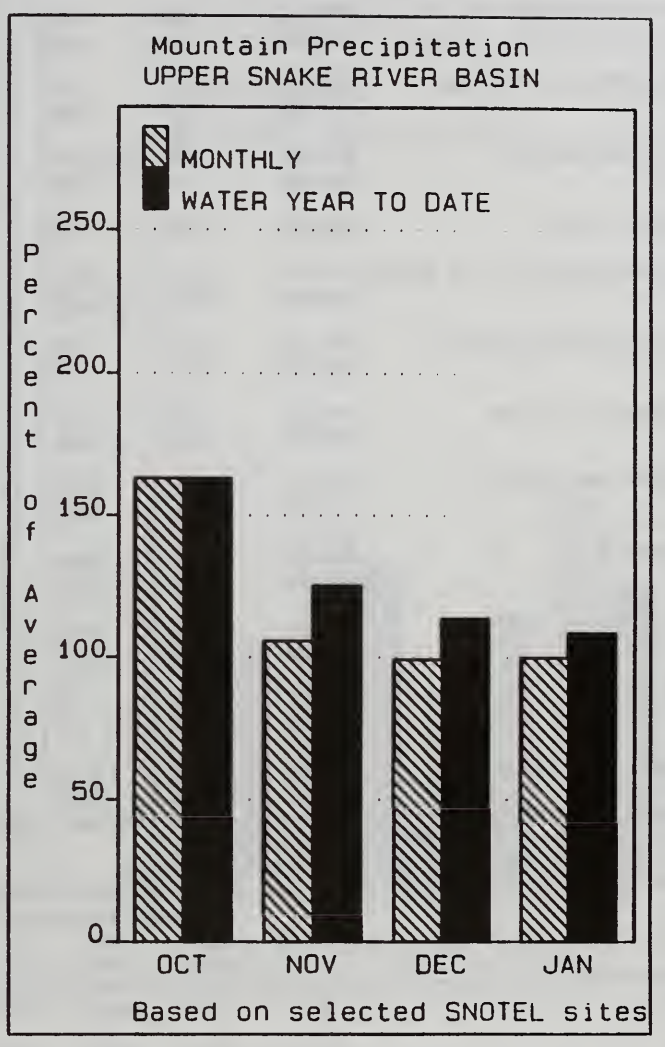
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

UPPER SNAKE RIVER BASIN

FEBRUARY 1, 1995





WATER SUPPLY OUTLOOK

Mountain precipitation in the Upper Snake was right on average during January, helping to maintain the good snowpack readings in eastern Idaho. The Henrys Fork continues to report the highest snowpack percentages in the state, 139% of average. However, some of the tributary basins in western Wyoming are only reporting snowpacks of 75 to 95% of average, bringing the total snowpack for the Snake above American Falls to 102% of average. Precipitation for the water year is 94% of average for the Snake above Palisades while the Henrys Fork/Teton basins reports 119% of average. Reservoir storage for the eight major reservoirs in the area is 27% of capacity -- less than half of normal for this time of year. Streamflow forecasts are similar to last month and range from 95 to 130% of average, with the higher flows expected in the Henrys Fork and Teton rivers. Current projections call for a full water supply for water users in the area.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - February 1, 1995

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
HENRYS FORK nr Ashton (2)	APR-JUL	595	650	690	127	730	785	544
	APR-SEP	810	855	900	123	945	985	730
HENRYS FORK nr Rexburg (2)	APR-JUL	1350	1500	1600	130	1700	1850	1228
	APR-SEP	1610	1840	1960	126	2080	2310	1551
FALLS RIVER nr Squirrel (2)	APR-JUL	360	415	440	121	465	515	364
	APR-SEP	455	495	521	121	545	585	432
TETON abv S Leigh Ck nr Driggs	APR-JUL	146	172	190	124	210	235	153
	APR-SEP	192	225	245	123	265	300	199
TETON nr St. Anthony (2)	APR-JUL	390	450	488	130	530	590	375
	APR-SEP	490	545	590	130	635	645	454
SNAKE nr Moran (1,2)	APR-SEP	740	820	880	101	940	1040	869
SNAKE R abv Palisades Rsvr nr Alpine	APR-JUL	1900	2140	2310	101	2480	2720	2286
	APR-SEP	2170	2470	2670	101	2870	3170	2647
GREYS R abv Palisades Reservoir	APR-JUL	250	300	335	101	370	420	333
	APR-SEP	300	355	395	102	435	490	388
SALT abv Reservoir nr Etna	APR-JUL	255	310	350	109	390	445	320
	APR-SEP	320	385	430	108	475	540	400
PALISADES Rsvr Inflow (adj)	APR-JUL	2670	3020	3260	101	3500	3850	3225
	APR-SEP	2750	3530	3790	101	4050	4850	3762
SNAKE nr Heise (2)	APR-JUL	2830	3220	3485	101	3750	4140	3451
	APR-SEP	2960	3770	4070	101	4370	5180	4048
SNAKE nr Blackfoot (2)	APR-JUL	3910	4520	4940	111	5360	5970	4444
	APR-SEP	4950	5620	6085	111	6550	7230	5482
PORTNEUF at Topaz	MAR-JUL	65	76	83	97	91	101	86
	MAR-SEP	81	93	102	95	111	123	107
AMERICAN FALLS RESV INFLOW	APR-JUL	2020	2970	3410	111	3850	4810	3066
	APR-SEP	2440	3190	3700	112	4210	4960	3303

UPPER SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	75.2	86.0	78.7
ISLAND PARK	135.2	86.2	122.2	100.7
GRASSY LAKE	15.2	12.1	13.4	10.8
JACKSON LAKE	847.0	389.6	622.7	479.6
PALISADES	1400.0	458.2	1293.5	1043.6
RIRIE	80.5	21.6	42.4	39.1
BLACKFOOT	348.7	108.2	187.8	235.8
AMERICAN FALLS	1672.6	104.3	1380.4	1141.5

UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - February 1, 1995

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Camas-Beaver Creeks	4	420	155
Henrys Fork River	10	235	139
Teton River	8	200	124
Snake above Jackson Lake	13	184	110
Gros Ventre River	3	156	88
Hoback River	6	168	76
Greys River	5	166	83
Salt River	5	156	95
Snake above Palisades	32	174	98
Willow Creek	7	207	122
Blackfoot River	4	190	103
Portneuf River	5	209	109
Snake abv American Falls	45	180	102

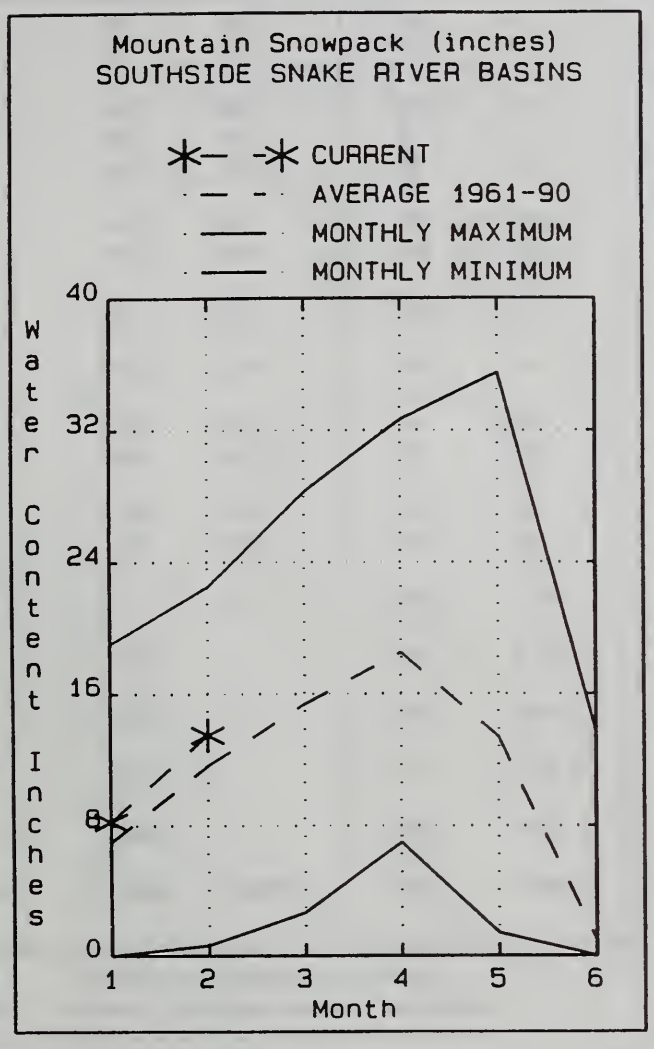
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

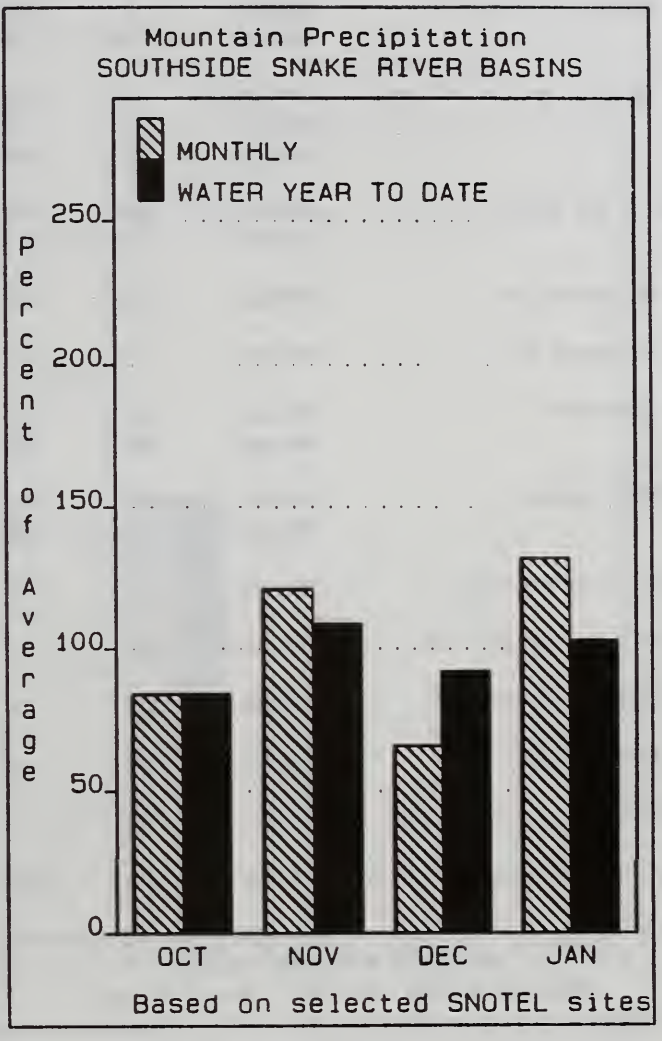
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

SOUTHSIDE SNAKE RIVER BASINS

FEBRUARY 1, 1995





WATER SUPPLY OUTLOOK

Heavy rain and snowfall maintained or improved snowpack conditions in the southside basins during January. Precipitation for the month was 132% of average, bringing the water year total to 103% of average. Snowpacks are near average in the Raft River and Goose/Trapper Creek basins. Conditions improve to the west: Salmon Falls, Bruneau, and Owyhee basins all report above average snowpacks. Warm temperatures and rainfall in early February caused an early rise in the Owyhee River, with the flow at Rome exceeding 16,000 cfs on February 2. Reservoir storage in the area ranges from 9% of capacity in Salmon Falls Reservoir to 21% in Owyhee Reservoir. Streamflow forecasts call for near to slightly above average flows for most of the major streams in the area, with slightly below normal flows expected for the lower Snake. As a result of the low storage in Oakley Reservoir (only 12% of capacity), the Surface Water Supply Index (SWSI) is near the median value, indicating the potential for a tight irrigation water supply. Elsewhere in the area, the total water supply should be adequate this summer. Whitewater floating opportunities look quite promising in the Bruneau, Jarbidge, and Owyhee rivers; a marked contrast from last year.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - February 1, 1995

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
OAKLEY RESERVOIR Inflow (2)	MAR-JUL	21	30	36	105	42	50	34
	MAR-SEP	24	32	38	103	45	53	37
SALMON FALLS CK nr San Jacinto	MAR-JUN	57	79	93	109	108	130	86
	MAR-JUL	59	83	99	109	115	139	91
	MAR-SEP	64	86	103	107	120	142	96
BRUNEAU nr Hot Spring	MAR-JUL	175	230	270	115	310	365	235
	MAR-SEP	175	235	275	112	315	380	246
OWYHEE nr Gold Ck (2)	MAR-JUL	17.0	27	34	100	41	51	34
OWYHEE nr Owyhee (2)	APR-JUL	41	68	86	100	104	131	86
OWYHEE near Rome	FEB-JUL	381	501	593	95	692	853	622
	FEB-SEP	399	522	614	96	715	876	642
OWYHEE RESV INFLOW	FEB-JUL	400	530	628	96	735	907	656
	FEB-SEP	459	585	680	99	781	944	684
SUCCOR CK nr Jordan Valley	FEB-JUL	7.1	14.2	19.0	117	24	31	16.2
SNAKE RIVER at King Hill (2)	APR-JUL	1270		2470	85		3650	2896
SNAKE RIVER near Murphy (2)	APR-JUL	1310		2560	86		3810	2980
SNAKE RIVER at Weiser (2)	APR-JUL	2130		4980	91		7810	5465
SNAKE RIVER at Hells Canyon Dam	APR-JUL	2390		5420	88		8460	6129
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	11300	17700	20600	95	23500	29900	21650

SOUTHSIDE SNAKE RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	77.4	9.5	12.9	26.5
SALMON FALLS	182.6	15.6	43.8	49.3
WILDHORSE RESERVOIR	71.5	18.4	33.6	31.5
OWYHEE	715.0	146.9	441.0	464.0
BROWNLEE	1419.3	1292.8	1292.5	1109.4

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - February 1, 1995

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	1	206	99
Goose-Trapper Creeks	2	209	93
Salmon Falls Creek	5	174	110
Bruneau River	6	217	120
Owyhee Basin Total	19	323	139

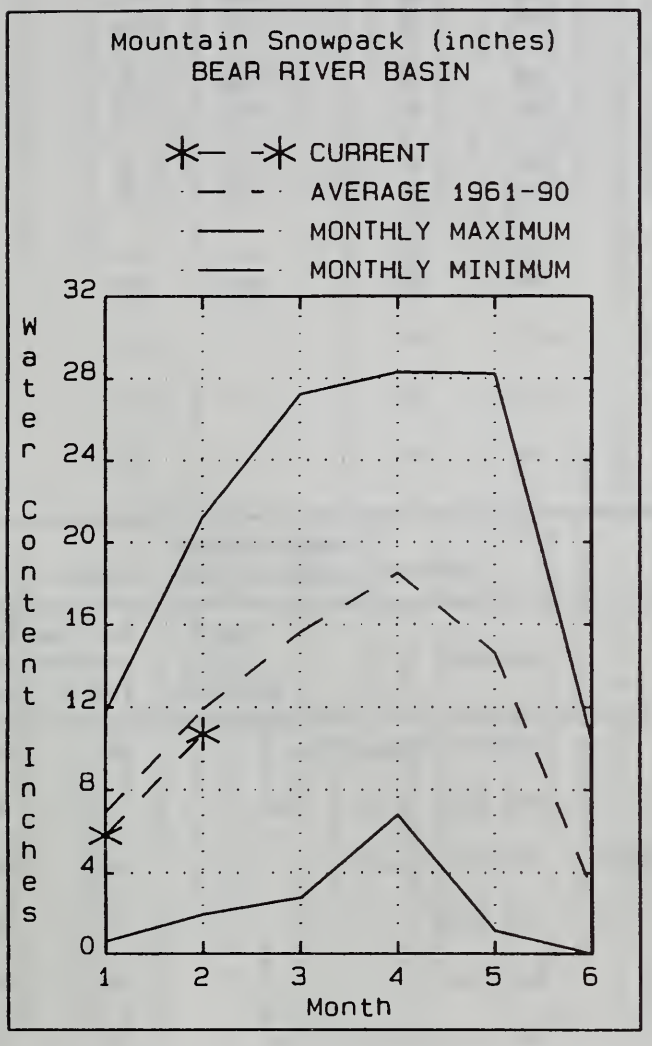
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

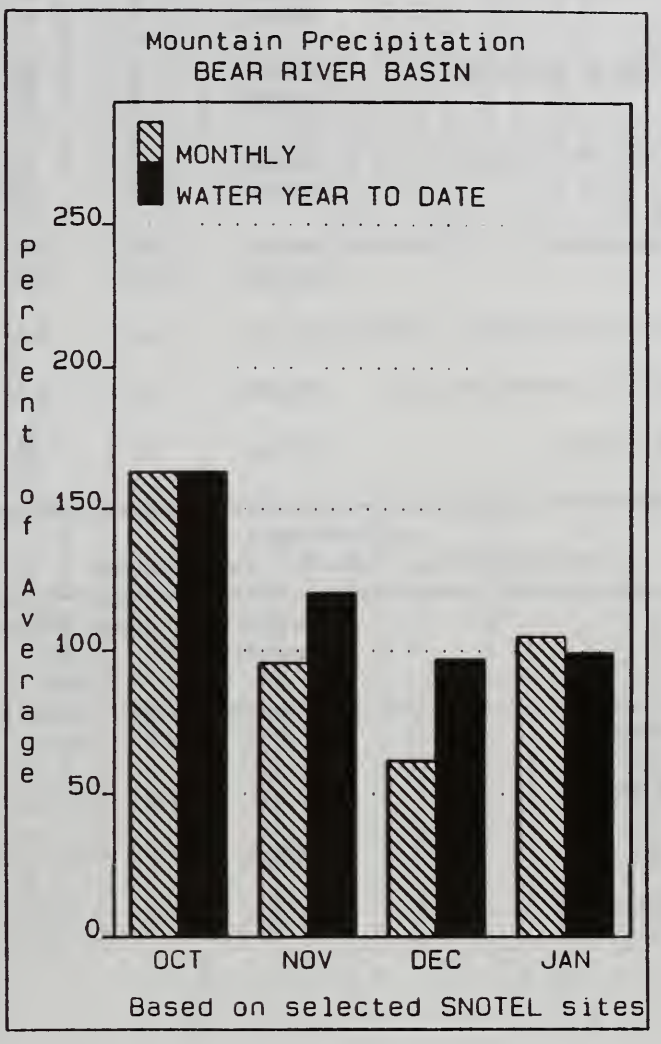
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

BEAR RIVER BASIN

FEBRUARY 1, 1995





WATER SUPPLY OUTLOOK

The Bear River basin continues to be an area of concern for low water supplies this year. Reservoir storage in Bear Lake is only 22% of capacity, and Montpelier Reservoir reports 20%. Snowpacks in the Bear River area remain the lowest in the state at slightly less than normal. Mountain precipitation was 105% of average in January, bringing the water year total to just about normal. Streamflow forecasts call for slightly below normal flows for most streams in the area. As a result of the low storage in Bear Lake, the Surface Water Supply Index (SWSI) is -3.8, indicating the potential for some agricultural shortages to occur. Several years of above average runoff are needed to return Bear Lake storage levels to normal conditions.

BEAR RIVER BASIN
Streamflow Forecasts - February 1, 1995

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BEAR R nr Randolph, UT	APR-JUL	39	82	112	95	142	185	118
	APR-SEP	36	85	118	93	151	200	127
SMITHS FORK nr Border, WY	APR-JUL	62	80	93	91	106	124	102
	APR-SEP	70	91	106	90	121	142	118
THOMAS FK nr WY-ID State Line	APR-JUL	15.0	21	27	82	35	50	33
	APR-SEP	16.0	23	29	81	37	53	36
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	159	220	265	92	310	370	288
	APR-SEP	175	245	295	90	345	415	327
MONTPELIER CK at Irr Weir nr Montpel	APR-JUL	6.5	8.5	10.2	84	12.3	16.1	12.2
MONTPELIER CK nr Montpelier (2)	APR-SEP	6.0	9.5	11.9	84	14.5	18.0	14.2
CUB R nr Preston	APR-JUL	31	39	45	96	51	59	47

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
WOODRUFF NARROWS	57.3	8.5	31.0	---
WOODRUFF CREEK	4.0	2.0	2.2	---
BEAR LAKE	1421.0	317.5	525.1	987.6
MONTPELIER CREEK	4.0	0.8	2.6	1.6

BEAR RIVER BASIN
Watershed Snowpack Analysis - February 1, 1995

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Smiths & Thomas Forks	3	180	87
Bear River ab WY-ID line	8	177	89
Montpelier Creek	2	188	83
Mink Creek	1	185	102
Cub River	1	143	98
Bear River ab ID-UT line	15	175	91
Malad River	1	204	124

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Streamflow Adjustment List For All Forecasts Published In Idaho Basin Outlook Report

Streamflow forecasts are projections of runoff volumes that would have occurred naturally without influences from upstream reservoirs or diversions. These values are referred to as natural or adjusted flows. To make these adjustments, changes in reservoir storage, diversions, and interbasin transfers are added or subtracted from the observed (actual) streamflow volumes. The following list documents the adjustments made to each forecast point in this report.

Panhandle River Basins

KOOTENAI R AT LEONIA, ID
+ LAKE KOOCANUSA (STORAGE CHANGE)

CLARK FORK R AT WHITEHORSE RAPIDS, ID
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS RESV (STORAGE CHANGE)

PEND OREILLE LAKE INFLOW, ID
+ PEND OREILLE R AT NEWPORT, WA
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS (STORAGE CHANGE
+ PEND OREILLE LAKE (STORAGE CHANGE)

PRIEST R NR PRIEST R, ID
+ PRIEST LAKE (STORAGE CHANGE)

COEUR D'ALENE R AT ENAVILLE, ID - No Corrections

ST. JOE R AT CALDER, ID - No Corrections

SPOKANE R NR POST FALLS, ID
+ COEUR D'ALENE LAKE (STORAGE CHANGE)

SPOKANE R AT LONG LAKE, ID
+ COEUR D'ALENE LAKE (STORAGE CHANGE)

Clearwater River Basin

CLEARWATER R AT OROFINO, ID - No Corrections

DWORSHAK RESERVOIR INFLOW, ID
+ CLEARWATER R NR PECK, ID
+ DWORSHAK RESV (STORAGE CHANGE)
- CLEARWATER R AT OROFINO, ID

CLEARWATER R AT SPALDING, ID
+ DWORSHAK RESV (STORAGE CHANGE)

Salmon River Basin

SALMON R AT SALMON, ID - No Corrections

SALMON R AT WHITE BIRD, ID - No Corrections

Weiser, Payette, Boise River Basins

WEISER R NR WEISER, ID - No Corrections

SF PAYETTE R AT LOWMAN, ID - No Corrections

DEADWOOD RESERVOIR INFLOW, ID
+ DEADWOOD R BLW DEADWOOD RESV NR LOWMAN
+ DEADWOOD RESV (STORAGE CHANGE)

NF PAYETTE R AT CASCADE, ID
+ CASCADE RESV (STORAGE CHANGE)

NF PAYETTE R NR BANKS, ID
+ CASCADE RESV (STORAGE CHANGE)

PAYETTE R NR HORSESHOE BEND, ID
+ DEADWOOD RESV (STORAGE CHANGE)
+ CASCADE RESV (STORAGE CHANGE)

BOISE R NR TWIN SPRINGS, ID - No Corrections

SF BOISE R AT ANDERSON RANCH DAM, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)

MORES CK NR ARROWROCK DAM, ID - No Corrections

BOISE R NR BOISE, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)
+ ARROWROCK RESV (STORAGE CHANGE)
+ LUCKY PEAK RESV (STORAGE CHANGE)

Wood and Lost River Basins

BIG WOOD R AT HAILEY, ID - No Corrections

BIG WOOD R NR BELLEVUE, ID - No Corrections

CAMAS CK NR BLAINE, ID - No Corrections

BIG WOOD R BLW MAGIC DAM NR RICHFIELD, ID
+ MAGIC RESV (STORAGE CHANGE)

LITTLE WOOD R NR CAREY, ID
+ LITTLE WOOD RESV (STORAGE CHANGE)

BIG LOST R AT HOWELL RANCH NR CHILLY, ID - No Corrections

BIG LOST R BLW MACKAY RESV NR MACKAY, ID
+ MACKAY RESV (STORAGE CHANGE)

LITTLE LOST R BLW WET CK NR HOWE, ID - No Corrections

Upper Snake River Basin

HENRYS FORK NR ASHTON, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)

HENRYS FORK NR REXBURG, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)
+ DIV FM HENRYS FK BTW ASHTON & ST. ANTHONY, I
+ DIV FM HENRYS FK BTW ST. ANTHONY & REXBURG,
+ GRASSY LAKE (STORAGE CHANGE)

FALLS R NR SQUIRREL, ID
+ GRASSY LAKE (STORAGE CHANGE)

TETON R ABV SO LEIGH CK NR DRIGGS, ID - No Corrections

TETON R NR ST. ANTHONY, ID
- CROSS CUT CANAL
+ SUM OF DIVERSIONS ABV GAGE

SNAKE R NR MORAN, WY
+ JACKSON LAKE (STORAGE CHANGE)

PACIFIC CK AT MORAN, WY - No Corrections

SNAKE R ABV PALISADES RESV NR ALPINE, WY
+ JACKSON LAKE (STORAGE CHANGE)

GREYS R ABV PALISADES RESV, WY - No Corrections

SALT R ABV RESV NR ETNA, WY - No Corrections

PALISADES RESERVOIR INFLOW, ID
+ SNAKE R NR IRWIN, ID
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)

SNAKE R NR HEISE, ID
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)

SNAKE R NR BLACKFOOT, ID
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)
+ DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
+ DIV FM SNAKE R BTW SHELLY AND BLACKFT, ID

PORTNEUF R AT TOPAZ, ID - No Corrections

AMERICAN FALLS RESERVOIR INFLOW, ID
+ SNAKE R AT NEELEY, ID
+ AMERICAN FALLS (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)
+ JACKSON LAKE (STORAGE CHANGE)

Southside Snake River Basins

OAKLEY RESERVOIR INFLOW, ID
+ GOOSE CK ABV TRAPPER CK NR OAKLEY, ID
+ TRAPPER CK NR OAKLEY, ID
SALMON FALLS CK NR SAN JACINTO, NV - No Corrections
BRUNEAU R NR HOT SPRINGS, ID - No Corrections
OWYHEE R NR GOLD CK, NV
+ WILDHORSE RESV (STORAGE CHANGE)
OWYHEE R NR ROME, OR
+ WILDHORSE RESV (STORAGE CHANGE)
+ JORDAN VALLEY RESV (STORAGE CHANGE)
OWYHEE RESERVOIR INFLOW, OR
+ OWYHEE R BLW OWYHEE DAM, OR
+ OWYHEE RESV (STORAGE CHANGE)
+ DIV TO NORTH AND SOUTH CANALS
SUCCOR CK NR JORDAN VALLEY, OR - No Corrections
SNAKE R - KING HILL, ID - No Corrections
SNAKE R NR MURPHY, ID - No Corrections
SNAKE R AT WEISER, ID - No Corrections
SNAKE R AT HELLS CANYON DAM, ID
+ BROWNLEE RESV (STORAGE CHANGE)

Bear River Basin

BEAR R NR RANDOLPH, UT
+ SULPHUR CK RESV (STORAGE CHANGE)
+ CHAPMAN CANAL DIVERSION
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
SMITHS FORK NR BORDER, WY - No Corrections
THOMAS FORK NR WY-ID STATELINE - No Corrections
BEAR R BLW STEWART DAM, ID
+ SULPHUR CK RESV (STORAGE CHANGE)
+ CHAPMAN CANAL DIVERSION
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)
+ TOTAL OF 12 CANALS
+ WESTFORK CANAL
+ DINGLE INLET CANAL
+ RAINBOW INLET CANAL
MONTPELIER CK NR MONTPELIER, ID
+ MONTPELIER CK RESV (STORAGE CHANGE)
CUB R NR PRESTON, ID - No Corrections

RESERVOIR CAPACITY DEFINITIONS - Different agencies use various definitions when reporting reservoir capacity and contents Reservoir storage terms include dead, inactive, active, and surcharge storage The table below lists these volumes for each reservoir in this report, and defines the stor volumes that NRCS uses when reporting capacity and current reservoir storage In most cases, NRCS reports usable storage, which includes active a inactive storage

BASIN/ RESERVOIR	DEAD STORAGE	INACTIVE STORAGE	ACTIVE STORAGE	SURCHARGE STORAGE	NRCS CAPACITY	NRCS FIGURES INCLUDE
PANHANDLE REGION						
HUNGRY HORSE	39.73	--	3451 00	--	3451.0	ACTIVE
FLATHEAD LAKE	Unknown	--	1791 00	--	1971.0	ACTIVE
NOXON RAPIDS	Unknown	--	335 00	--	335.0	ACTIVE
PEND OREILLE	406.20	112.40	1042 70	--	1561.3	DEAD + INACTIVE + ACTIVE
COEUR D'ALENE	--	13.50	225 00	--	238.5	INACTIVE + ACTIVE
PRIEST LAKE	20.00	28.00	71.30	--	119.3	DEAD + INACTIVE + ACTIVE
CLEARWATER BASIN						
DWORSHAK	--	1452.00	2007 00	--	3459.0	INACTIVE + ACTIVE
WEISER/BOISE/PAYETTE BASINS						
MANN CREEK	1.61	0.24	11 10	--	11.1	ACTIVE
CASCADE	--	50.00	653 20	--	703.2	INACTIVE + ACTIVE
DEADWOOD	1.50	--	161.90	--	161.9	ACTIVE
ANDERSON RANCH	29.00	41.00	423 18	--	464.2	INACTIVE + ACTIVE
ARROWROCK	--	--	286 60	--	286.6	ACTIVE
LUCKY PEAK	--	28.80	264.40	13.80	293.2	INACTIVE + ACTIVE
LAKE LOWELL	--	8.00	169 10	--	169.1	ACTIVE
WOOD/LOST BASINS						
MAGIC	--	--	191 50	--	191.5	ACTIVE
LITTLE WOOD	--	--	30 00	--	30.0	ACTIVE
MACKAY	0.13	--	44 37	-	44.4	ACTIVE
UPPER SNAKE BASIN						
HENRYS LAKE	--	--	90 40	--	90.4	ACTIVE
ISLAND PARK	0.40	--	127 30	7 90	135.2	ACTIVE + SURCHARGE
GRASSY LAKE	--	--	15.18	--	15.2	ACTIVE
JACKSON LAKE	--	--	847 00	--	847.0	ACTIVE
PALISADES	44.10	155.50	1200 00	--	1400.0	DEAD + INACTIVE + ACTIVE
RIRIE	4.00	6.00	80 54	10.00	80.5	ACTIVE
BLACKFOOT	--	--	348.73	--	348.7	ACTIVE
AMERICAN FALLS	--	--	1672.60	--	1672.6	ACTIVE
SOUTHSIDE SNAKE BASINS						
OAKLEY	--	--	77.40	--	77.4	ACTIVE
SALMON FALLS	48.00	--	182 65	--	182.6	ACTIVE
WILDHORSE	--	--	71 50	--	71.5	ACTIVE
OWYHEE	406.83	--	715.00	--	715 0	ACTIVE
BROWNLEE	0.45	444.00	975.30	--	1419.3	INACTIVE + ACTIVE
BEAR RIVER BASIN						
WOODRUFF NARROWS	--	1.50	57 30	--	57.3	ACTIVE
WOODRUFF CREEK	--	4 00	4 00	--	4.0	ACTIVE
BEAR LAKE	--	--	1421 00	--	1421 0	ACTIVE

Interpreting Streamflow Forecasts

Introduction

Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflow forecasts are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

Most Probable (50 Percent Chance of Exceeding) Forecast. This forecast is the best estimate of streamflow volume that can be produced given current conditions and based on the outcome of similar past situations. There is a 50 percent chance that the streamflow volume will exceed this forecast value. There is a 50 percent chance that the streamflow volume will be less than this forecast value.

The most probable forecast will rarely be exactly right, due to errors resulting from future weather conditions and the forecast equation itself. This does not mean that users should not use the most probable forecast; it means that they need to evaluate existing circumstances and determine the amount of risk they are willing to take by accepting this forecast value.

To Decrease the Chance of Having Too Little Water

If users want to make sure there is enough water available for their operations, they might determine that a 50 percent chance of the streamflow volume being lower than the most probable forecast is too much risk to take. To reduce the risk of not having enough water available during the forecast period, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded (or possibly some point in-between). These include:

70 Percent Chance of Exceeding Forecast. There is a 70 percent chance that the streamflow volume will exceed this forecast value. There is a 30 percent chance the streamflow volume will be less than this forecast value.

90 Percent Chance of Exceeding Forecast. There is a 90 percent chance that the streamflow volume will exceed this forecast value. There is a 10 percent chance the streamflow volume will be less than this forecast value.

To Decrease the Chance of Having Too Much Water

If users want to make sure they don't have too much water, they might determine that a 50 percent chance of the streamflow being higher than the most probable forecast is too much of a risk to take. To reduce the risk of having too much water available during the forecast period, users can base their operational decisions on one of the forecasts with a smaller chance of being exceeded. These include:

30 Percent Chance of Exceeding Forecast. There is a 30 percent chance that the streamflow volume will exceed this forecast value. There is a 70 percent chance the streamflow volume will be less than this forecast value.

10 Percent Chance of Exceeding Forecast. There is a 10 percent chance that the streamflow volume will exceed this forecast value. There is a 90 percent chance the streamflow volume will be less than this forecast value.

Using the forecasts - an example

Using the Most Probable Forecast. Using the example forecasts shown below, users can reasonably expect 36,000 acre-feet to flow past the gaging station on the Mary's River near Deeth between March 1 and July 31.

Using the Higher Exceedance Forecasts. If users anticipate a somewhat drier trend in the future (monthly and seasonal weather outlooks are available from the National Weather Service every two weeks), or if they are operating at a level where an unexpected shortage of water could cause problems, they might want to plan on receiving only 20,000 acre-feet (from the 70 percent chance of exceeding forecast). In seven out of ten years with similar conditions, streamflow volumes will exceed the 20,000 acre-foot forecast.

If users anticipate extremely dry conditions for the remainder of the season, or if they determine the risk of using the 70 percent chance of exceeding forecast is too great, then they might plan on receiving only 5000 acre-feet (from the 90 percent chance of exceeding forecast). Nine out of ten years with similar conditions, streamflow volumes will exceed the 5000 acre-foot forecast.

Using the Lower Exceedance Forecasts. If users expect wetter future conditions, or if the chance that five out of every ten years with similar conditions would produce streamflow volumes greater than 36,000 acre-feet was more than they would like to risk, they might plan on receiving 52,000 acre-feet (from the 30 percent chance of exceeding forecast) to minimize potential flooding problems. Three out of ten years with similar conditions, streamflows will exceed the 52,000 acre-foot forecast.

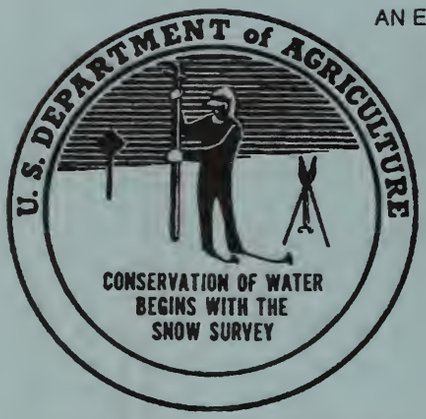
In years when users expect extremely wet conditions for the remainder of the season and the threat of severe flooding and downstream damage exists, they might choose to use the 76,000 acre-foot (10 percent chance of exceeding) forecast for their water management operations. Streamflow volumes will exceed this level only one year out of ten.

UPPER HUMBOLDT RIVER BASIN

FORECAST POINT	FORECAST PERIOD	STREAMFLOW FORECASTS <--DRIER-- FUTURE CONDITIONS --WETTER--> Chance of Exceeding 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG)	30% (1000AF)	10% (1000AF)	25 YR (1000AF)
MARY'S RIVER	MAR-JUL	5.0	20.0	36	77	52	76	47
nr Deeth	APR-JUL	8.0	17.0	31	74	45	67	42
LAMOILLE CREEK	MAR-JUL	6.0	16.0	24	79	32	43	31
nr Lamoille	APR-JUL	4.0	15.0	22	75	30	41	30
NF HUMBOLDT RIVER at Devils Gate	MAR-JUL	6.0	12.0	43	73	74	121	59

For more information concerning streamflow forecasting ask your local NRCS field office for a copy of "A Field Office Guide for Interpreting Streamflow Forecasts".

AN EQUAL OPPORTUNITY EMPLOYER



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In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Natural Resources Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Natural Resources Conservation Service, West National Technical Center, 101 SW Main Street, Suite 1700, Portland, OR 97204-3225.